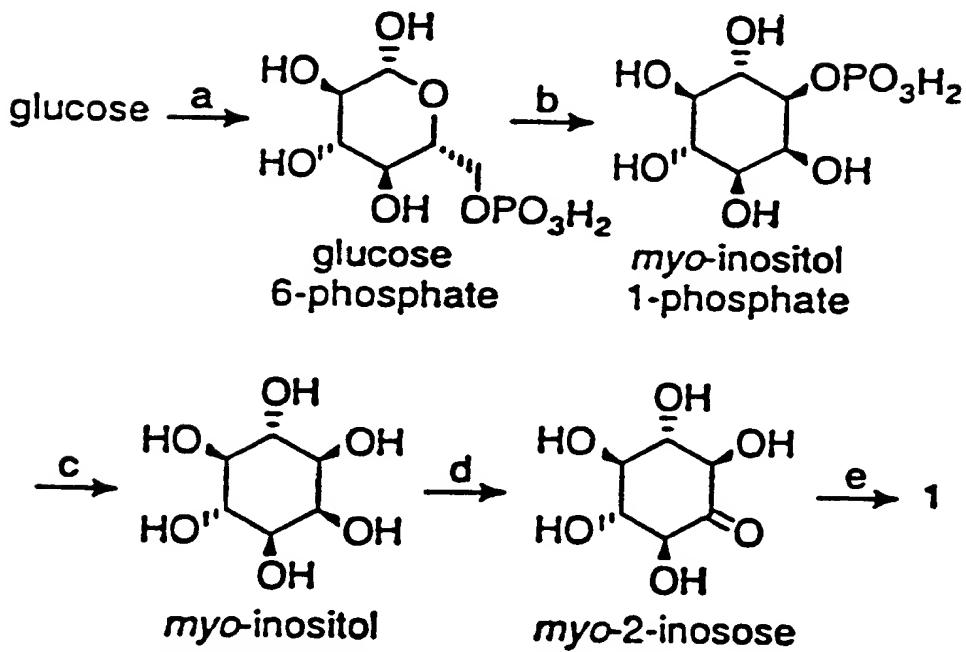


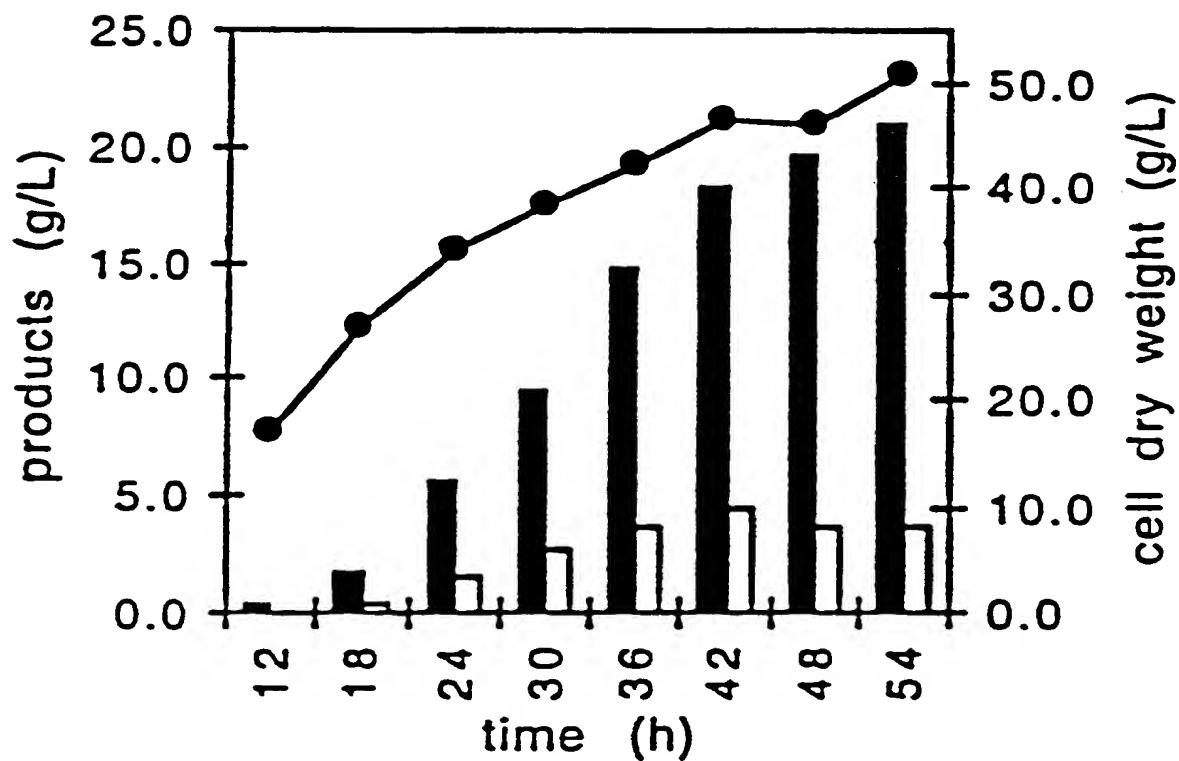
FIGURE 1



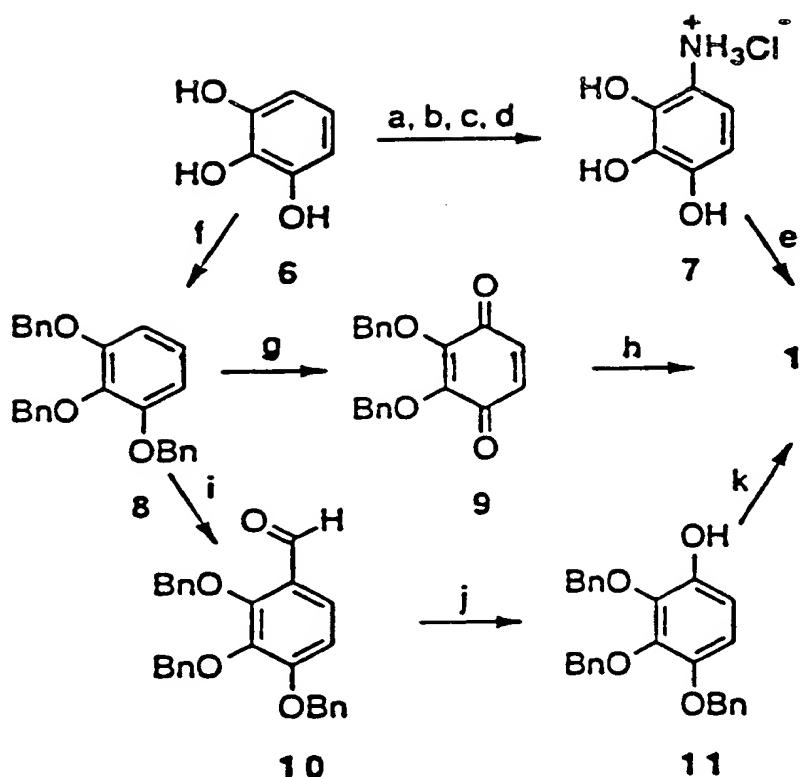
^aKey: (a) phosphoenolpyruvate:carbohydrate phosphotransferase; (b) *myo*-inositol 1-phosphate synthase; (c) phosphatase activity; (d) dehydrogenase activity; (e) 0.5 M H₂SO₄, H₂O, reflux.

FIGURE 2

2/4

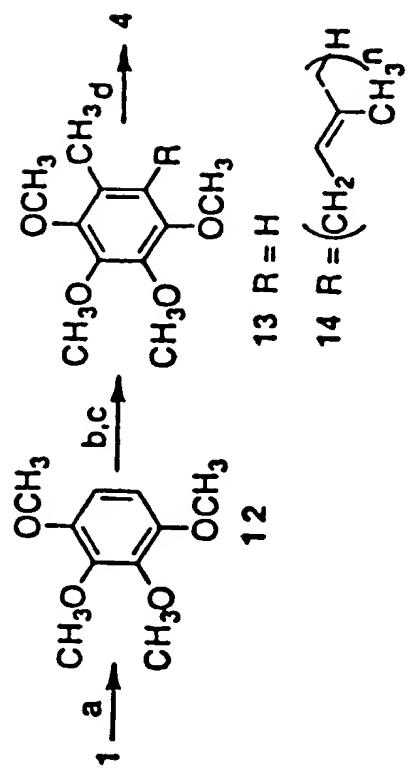
**FIGURE 3**

3/4



^aKey: (a) $\text{Cl}_2\text{C}(\text{O})$, pyridine, xylene, reflux; (b) H_2SO_4 , HNO_3 ; (c) KOH (aq.); (d) Zn, HCl; (e) H_2O , reflux; (f) BnBr , K_2CO_3 , acetone, reflux, 83 %; (g) $\text{K}_3\text{Fe}(\text{CN})_6$, H_2O_2 , AcOH, 11 %; (h) H_2 , 10 %Pd/C, EtOH, 100 %; (i) N-methylformanilide, POCl_3 , 60 °C, 93 %; (j) HCO_2H , H_2O_2 , CH_2Cl_2 , 0 °C to rt, 95 %; (k) H_2 , 10 % Pd/C, EtOH, 80%.

FIGURE 4



Key: (a) $(CH_3)_2SO_4$, $NaOH$, 69 %; (b) (i) $n\text{-BuLi}$, TMEDA, hexanes, THF, $0^\circ C$; (ii) CH_3I , $0^\circ C$, 83%; (c) (i) $n\text{-BuLi}$, TMEDA, hexanes, $0^\circ C$; (ii) $CuCN$, THF, Et_2O , $0^\circ C$; (iii) famesyl bromide, $-78^\circ C$, 57 %; (d) CAN, pyridine-2,6-dicarboxylate, CH_3CN/H_2O , $0^\circ C$, 46%.

FIGURE 5